

6272-017-3

*AP 38*

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF:

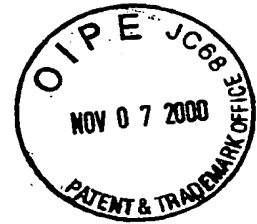
DETLEF ALBIN ET AL

: EXAMINER: DEXTER

SERIAL NO: 08/650,709

CPA FILED: August 10, 1999

: GROUP ART UNIT: 3724



FOR: DEVICE AND A PROCESS FOR  
COARSELY GRINDING HYDROUS  
POLYMER GELS

APPEAL BRIEF UNDER 37 C.F.R. §1.192

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

Appellants herein appeals the final rejection of Claims 17, 19, 21, 22, 26 and 27 for  
the reasons set forth below.

REAL PARTY IN INTEREST AND RELATED APPEALS AND INTERFERENCES

The real party in interest in the present application is the assignee of record,  
Stockhausen GmbH & Co. KG of Krefeld, Germany. There are no related appeals or  
interferences.

### STATUS OF CLAIMS

Claims 17, 19, 21, 22, 26 and 27 are active and finally rejected. Claims 2, 12, 13 and 18 have been withdrawn from consideration. Claims 1, 3-11, 14-16, 20 and 23-25 have been canceled.

### STATUS OF AMENDMENTS

An amendment for responding to the rejection under 35 U.S.C. 112, second paragraph, is being submitted herewith, and is reflected in the claims as found in the attached APPENDIX. Since this amendment conforms to the Examiner's suggestion, this rejection is believed to be moot.

### SUMMARY OF THE INVENTION

The invention is directed to a device for processing hydrous polymer gel of variable thickness. It includes a conveying device which is driven to convey the layer of hydrous polymer gel to the nip between the cutting roll and the backup roll at a speed less than the rotational speed of the cutting roll. For example, referring to the numeration of the figures, the conveying device 100 conveys the layer 10 of hydrous polymer gels to a nip between the cutting roll 11 and the backup roll 12. The conveying device is arranged to convey the layer of hydrous polymer gel at a speed less than the rotational speed of the cutting roll. This accelerates the cut sections away from the nip and so avoids congestion of the gel at the cutting roll (see last four lines of page 4, and the middle paragraph of page 10 in the specification).

The backup roll 12 has notches 12A (Fig. 5) in which the edges of the cutting elements 14, 15 may be guided (page 11, lines 12-13).

### ISSUES

The first issue to be considered in this appeal is whether Claims 17-19 and 26 are obvious over U.S. patent 127,235 (Heywood) in view of U.S. patent 1,062,627 (Williams).

The second issue to be considered in this appeal is whether Claims 21, 22 and 27 are obvious over Heywood in view of Williams and U.S. patent 3,508,461 (Stream).

The third issue to be considered in this appeal is whether Claims 19, 21, 22 and 26 are anticipated by U.S. patent 4,682,523 (Johnson et al).

The fourth issue to be considered in this appeal is whether Claims 17, 21 and 22 are obvious over Johnson et al.

The fifth issue to be considered in this appeal is whether Claim 27 is obvious over Johnson et al in view of Stream.

The sixth issue to be considered in this appeal is whether proposed Figure 5 finds support in the original disclosure.

### GROUPING OF CLAIMS

Claims 17, 19, 21, 22 and 26 stand or fall together. Claim 27 stands or falls alone.

## ARGUMENT

### First Issue

Claims 17-19 and 26 are not obvious over Heywood in view of Williams. The Examiner has recognized that there is no teaching in Heywood for the claimed feature of a conveying device being driven separately from the cutting roll at a speed less than the circumferential speed of said cutting roll. Instead, the Examiner has taken:

Official notice that it is old and well known in the art to provide conveyors to move material from one work station... to another by independently driven conveyors to gain the benefits of automated operation... as well as the well known benefits of conveying devices such as efficient and continuous movement of material.

Williams was cited to teach a separately driven conveyor. According to the final Office Action, "As is well known in the art, these [separately driven] conveyors can be driven at any desired speed to provide a desired spacing of the material during the material processing." The Examiner therefore considered it to have been obvious for one skilled in the art "to provide separately-driven conveyors to feed the material to or from the device of Heywood for the well known benefits" including those described in Williams.

However, the Examiner's proposed modification is **contrary to the teachings of Heywood** and renders it unsatisfactory for its intended purpose, and so is improper under 35 U.S.C. 103. See MPEP 2143.02 and MPEP 2143.01. The machine of Heywood is directed to forming fillers, binders and wrappers of cigars. In Heywood, a common smooth roller C is driven by a driving gear D which engages with a driven gear E for driving the cutting roller F which forms a nip with the common roller C. An endless apron or conveyor L passes around the common roller C, and is evidently driven by the engagement with the common roller C.

The leaves of tobacco are conveyed by the apron L to the nip between the cutting roller F and the common roller C, where they are cut to provide the stock for fillers, binders and wrappers of cigars. For example, the stock for the fillers are cut "at exactly the right length" (right hand column, line 9) by the horizontal blades e of the cutting roller F.

Those skilled in the art would not have been motivated to have driven the conveying device L separately from the cutting roll, regardless of the teachings of Williams, both because it would have increased the complexity of the device, and because the resulting alleged "advantage" of being able to drive the conveying device at a speed different from that of the cutting roll would be *undesirable* in Heywood. By driving the tobacco leaves on the apron at the same speed as the cutting roll, the tobacco leaves in Heywood may be cut without wrinkling or shearing in order to provide filler having exactly the right length: since the bottommost leaf in the layer of leaves on the apron is cut after the topmost leaf, a speed differential will tend to shift the layers of leaves as they are being cut. If one were to drive the conveying device of Heywood separately from the cutting roll so as to permit a greater or lesser rotational speed of the conveying device as compared to the cutting roll, the resulting greater or lesser rotational speed would undesirably produce either wrinkling or shearing in the cut stock, depending upon the speed differential between the conveying device and the cutting roll. Thus, not only is there no motivation taught in Heywood for using a separately driven conveying device, for achieving a speed differential, but this would render Heywood incapable of cutting tobacco to produce cigars; it could not carry out its intended function, which suggests a motivation to *avoid* such a construction -- a teaching *contrary to the claims*.

As for Williams, the Examiner has not alleged that Williams actually discloses a conveyer driven at a speed different from that of a cutter ("as is well known in the art, these

conveyers can be driven at any desired speed" (emphasis added)). Since all claim limitations must be considered, the Examiner cannot properly ignore this limitation. In any case, the shortcomings of the prior art are far more fundamental than the lack of a teaching of a conveyer driven at a speed different from that of a cutter. The combination of Heywood and Williams to provide a separately driven conveyer *capable of* such a speed differential would be contrary to the teachings of Heywood, and so Appellants respectfully submit that the claims define over any combination of Heywood and Williams.

#### Second Issue

Concerning the rejection of Claims 21, 22 and 27 based upon Heywood and Williams, in view of Stream, the Stream reference was only cited for the teaching of a backup roll with depressions, and provides no teachings for overcoming the shortcomings of the primary references with respect to independent Claim 26. In addition, Stream merely teaches a chopper for glass filaments, and so it would not have been obvious for those skilled in the art to provide the notches 102 of Stream in the *tobacco cutter* of Heywood.

#### Third Issue

As to the rejection of Claims 19, 21, 22 and 26 as being anticipated by Johnson et al, according to Johnson et al, glass wool is cut into plugs 50 by a rotating cutter 22 which is backed up by an anvil roll 26. The cutter 22 is driven by a driving device 30, evidently a motor.

There is no description of the driving of the anvil roll 26, but it is evidently driven by frictional contact with the cutting roll 28, which is driven by the motor 30. Similarly, there is

no description that the conveyers 14 and 18 which support and compress the wool blanket 16 are driven. They evidently respond, due to friction, to the advancement of the blanket itself by the rotation of the cutting roll 28.

Therefore, the "conveying device" which conveys the layer of material to the nip between the cutting roll 28 and the anvil roll 26 in Johnson et al is the cutting roll itself, which certainly must convey the roll blanket at the same speed as its own circumferential speed. Conversely, if one were to say that the "conveying device" in Johnson et al was the conveyor belt 18, since these belts must passively respond to the advancement of the blanket 16 by the drive of the cutting roller 28, they convey the blanket to the nip at the same speed as the circumferential speed of the cutting roller, and certainly are not driven to convey the blanket to the nip "at a speed sufficiently less than the circumferential speed of the cutting roll to avoid congestion."

Thus, Johnson et al does not anticipate any of the claims since it does not disclose "a conveying device driven to convey the layer of hydrous polymer gel to the nip at a speed sufficiently less than the circumferential speed of said cutting roll to avoid congestion." Moreover, the distinction of the claims over this prior art is not the relative speeds, *per se*, which the Examiner considers to be a matter of use, but the failure of the prior art to comprise a *structure having the capability* of being driven to convey a layer of hydrous polymer gel to the nip at a speed different than the circumferential speed of said cutting roll.

As to the Examiner's allegation that the conveyor could be driven at any speed "by hand," (see page 2 of Advisory Action), this ignores the claim limitation that the conveying device is driven to convey the layer of hydrous polymer gel to the nip at a speed sufficiently less than the circumferential speed of said cutting roll "*to avoid congestion.*" The conveyor

must be capable of such driven movement while the wool blanket 16 is being cut if the “to avoid congestion” limitation is to be met. But the wool blanket itself would then frictionally constrain the conveyor to move at the same speed as the cutter 22, and so the conveyor is incapable of being driven by hand to convey a layer of hydrous polymer gel to the nip at a speed different than the circumferential speed of said cutting roll.

#### Fourth Issue

Concerning the rejection of Claim 17 as being obvious over Johnson et al, Appellants note that Claim 17 depends from Claim 26, which is unobvious from Johnson et al. The Examiner has put forth no motivation for those skilled in the art to have modified Johnson et to include a conveying device is driven to convey a layer of hydrous polymer gel to the nip at a speed sufficiently less than the circumferential speed of said cutting roll to avoid congestion.

#### Fifth Issue

Concerning the rejection of Claim 27 based upon Johnson et al in view of Stream, the Stream reference was only cited for the teaching of a backup roll with depressions, and provides no teachings for overcoming the shortcomings of the primary reference with respect to independent Claim 26. In addition, Stream merely teaches a chopper for glass filaments, and so it would not have been obvious for those skilled in the art to provide the notches 102 of Stream in the *wool blanket cutter* of Johnson et al.



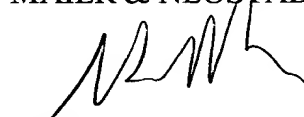
Sixth Issue

The Examiner has both objected to the drawings as failing to disclose the claimed "depressions," and has disapproved proposed Figure 5 which illustrates the claimed "depressions." The Examiner states that Applicants did not provide a basis in the original disclosure for the specific back-up roll configuration, but line 12 of page 11 describes "notches" in the surface of the back-up roll to guide the edges of the cutting elements. Proposed Figure 5 shows nothing more than this.

Appellants therefore respectfully submit that the outstanding rejections are improper and should be REVERSED.

Respectfully submitted,

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## APPENDIX

17. The device of Claim 26, wherein the at least one axially extending cross-cutting element is formed of a flat steel polished on one side.

19. The device of Claim 26, wherein the at least one axially extending cross-cutting element is arranged in parallel to a longitudinal axis of the cutting roll.

21. The device of Claim 26, wherein the back-up roll is coated with a plastic material.

22. The device of Claim 21, wherein the plastic material is selected from the group consisting of polyethylene, polypropylene and polytetrafluorethylene.

26. A device for processing hydrous polymer gel of variable thickness, comprising:  
a cutting roll having at least one axially extending cross cutting element including a cutting edge, and a circumferentially extending cutting element including another cutting edge;

a back-up roll spaced from said cutting roll so as to form a nip, said back-up roll being mounted relative to said cutting roll such that at least one of said cutting edges cooperates with said back-up roll to cut a layer of hydrous polymer gel at the nip; and

a conveying device disposed upstream of said nip and driven to convey the layer of hydrous polymer gel to the nip at a speed sufficiently less than the circumferential speed of said cutting roll to avoid congestion.

27. The device of claim 26, wherein the surface of the back-up roll has depressions for receiving the cutting edges.